

### REMARKS

The above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

#### Claim Interpretation

In this Office Action the examiner indicates that the term 'plumb' is taken to mean "on" it. That is to say, the examiner indicates that the term can mean 1) directly above or below or 2) directly on. Clearly, an aircraft can be above, on or below and change to below or above and therefore require correction. Indeed, from the Applicant's point of view, the term plumb is well chosen in that it encompasses all three of the possibilities outlined by the examiner. Applicant submits that the interpretation taken by the examiner is the most restrictive rather than the broadest interpretation.

#### Rejections under 35 USC § 102

The rejection of claims 1, 2, 4 and 5 under 35 USC 102(b) as being anticipated by Doniger, 3,892,373 is respectfully traversed.

In this response, claim 1, has been amended via the inclusion of the subject matter of claim 2 and claim 4 has been amended via the inclusion of claim 5.

It is submitted that Doniger does not disclose that the width of the capture zone is determined as a function of the height h and of the square of the speed v. That is to say, in this rejection it is stated that:

**Doniger discloses a capturing a predetermined vertical profile segment aircraft in a capture zone by applying a transition between a guidance submode which the aircraft is in and the guidance submode adapted to the following of the vertical profile segment which is captured determining the width of the capture zone as a function of the height h of the vertical profile to be captured and of the speed v which the aircraft has when plumb**

with this vertical profile segment (col 5, line 25-29; ***"The rate portion is substantially constant and is proportional to the groundspeed of the aircraft"***) when the aircraft is not on the profile or at this height when the aircraft is on the profile; and the width of the capture zone is determined as a function of the height h and of the square of the speed v (col 4, line 60-62; ***"The integrator is actually in a closed loop formed by the signal path for signal he through the variable limiter"***) on column 4 and on lines 25-28, on column 5.

However, the feature that the width of the capture zone is determined as a function of the height h and of the square of the speed v, is simply not disclosed and is not suggested by the sections of the reference referred to. The word "speed" for example appears but twice and then never in any context which would suggest that its value should be squared. How one extracts that the width of the capture zone is determined as a function of the height h and of the square of the speed from "[T]he integrator is actually in a closed loop formed by the signal path for signal he through the variable limiter", is simply not understood and is submitted as not being tenable.

Attention is called to the fact that rejections under the 35 USC § 102 statute, are based on the premise that to anticipate a claim, each and every element of the claim must be shown in a single reference. When a claimed element cannot be found in the reference, as is the case in this instance, the reference does not anticipate the claimed invention.

Further, as noted in the previous response, it is incumbent upon the Examiner to identify where in the reference each element may be found. Ex parte Levy, 17 U.S.P.Q.2d 1461 (Bd. Pat. App. Infr. 1990). Indeed, even though the examiner has cited column/line sections, of the primary reference, the cited sections fail to disclose that which is purported.

#### Rejections under 35 USC § 103

The rejection of claims 3 and 6 under 35 USC § 103(a) as being unpatentable over Doniger, as applied above in further view of Lambregts et al. 5079711, is respectfully traversed.

As noted above, the Doniger reference fails to anticipate the subject matter of claim 1. Therefore, there is nothing in Lambregts et al. that would assist in overcoming this shortcoming and therefore nothing that would assist in establishing a *prima facie* case of obviousness.

Further, Doniger is relied upon for its teachings of total energy control. This is used to suggest the subject matter of claims 3 and 6. The abstract of this reference is such as to disclose:

A variable bandwidth factor KALT is applied in a total **energy control system** to obtain a **reduction in throttle activity** while maintaining system stability. The system has a total energy control loop and an energy distribution control loop. In the former, a net thrust command signal  $T_c$  is **generated to reduce the total energy error to zero**. In the latter, an elevator position command signal  $\Delta e_c$  is generated to reduce the energy rate distribution error, i.e. correct the distribution of energy between kinetic energy (speed) and potential energy (altitude). The error signal input into each loop has a flight path component and a speed component. The factor KALT is applied to both components of the total energy error to **reduce the bandwidth of the total energy control loop** with increasing altitude and thereby reduce throttle activity. The factor KALT is also applied to one of the components of the energy distribution error to prioritize reduction of that component to zero by control of elevator position. Preferably, speed control is prioritized, and energy errors are **channeled into short term deviations in altitude**. (Emphasis added)


It is submitted that this would not lead to the subject matter of claims 3 or 6. Indeed, it is not seen that the “total energy” approach would lead anywhere in the direction of the automated glide path control which is found in Doniger.

**Conclusion**

All objections and rejections having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 CFR 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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